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New York (N.Y.) Board of Rapid Transit Railroad...

Report of
Wm. Barclay Parsons...

New York

1903

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BOARD OF RAPID TRANSIT RAILROAD COMMISSIONERS

REPORT

OF

WM. BARCLAY PARSONS, Chief Engineer,

ON A

COMPREHENSIVE PLAN OF RAPID TRANSIT

Boroughs of Manhattan, Bronx and Queens.

SUBMITTED FEBRUARY 19, 1903.

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Box 305

NEW YORK:
MAIL AND EXPRESS COMPANY,
203 BROADWAY,
1903

Edwin S. Davis
Manhattan Ry Co

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BOARD OF RAPID TRANSIT RAILROAD COMMISSIONERS.

CHIEF ENGINEER'S OFFICE,

320 Broadway, New York.

New York, February 19, 1903.

Hon. A. E. ORR, President, Rapid Transit Board:

Sir—It is with great satisfaction that I now find myself able, in obedience to the resolution adopted by the Board, to propose a general solution of the rapid transit problem in the Greater New York. The present report will deal with Manhattan and Bronx boroughs, and a later report, soon to follow, will deal with Brooklyn. The plan to be submitted accords with the general and far-seeing programme which the present Board entertained from the very time of its organization in 1894, and toward the completion of which its efforts have, in spite of many difficulties and obstructions, tended as rapidly as the means at the disposal of the Board have made possible.

Upon originally proposing the Broadway route, later in the negotiations with the owners of the Elevated and New York Central and Hudson River railroads, and still later in adopting the routes of the present Manhattan-Bronx railroad, it was the intention of the Board that whatever work the means then at hand made possible should be done with relation to a larger and really comprehensive plan. The inability of the Board to carry out such larger intention has been represented by the delay of work which must now be taken up, and taken up under disadvantages from which its earlier performance would have been free. The partial or even preliminary character of the routes of both the Manhattan-Bronx and the Brooklyn-Manhattan railroads now under construction was recognized from the beginning, and was often and publicly stated by the Board. The pecuniary limitations to which the Board was held by the debt limit of the City or by the judgment of its executive and financial heads, or by determinations of the Supreme Court, had, for years before the Board adopted the resolution in obedience to which this report is submitted, made it premature to propose a general plan commensurate with the rapid transit necessities of the City.

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My present report is a proposal to complete the programme to which the present Board (and, if I may say so, myself as its Chief Engineer) have been dedicated for upward of eight years.

Immediately after the adoption of the resolution directing this report to be made the Pennsylvania and the New York Central railroads and the New York and Jersey Tunnel companies began to submit plans for the construction of new lines and the expansion of old ones. As these plans entailed innovations in the handling and distribution of the great influx of suburban travel, it was deemed wise to wait until such plans were finally settled before presenting a scheme for the expansion of the local systems, in order that all might be made to harmonize and to avoid inconvenient breaks or unnecessary and expensive readjustment. The above-mentioned plans are now fixed, giving the Pennsylvania Railroad a great terminus between Seventh and Ninth avenues and Thirty-first and Thirty-third streets; the New York Central a largely increased terminus at Forty-second street, thus permanently establishing that point as a centre of through passenger travel, and the New York and Jersey Tunnel a station at Greenwich and Christopher streets.

Tremendous increase in passenger travel on all lines during the past year clearly indicates that when the present Subway system now under construction from Brooklyn to The Bronx is completed that it will be almost immediately congested, so that no great amount of permanent relief can be counted on. In order to meet the growing and imperative demands for increased facilities, arising from the natural growth of our City, it is evident that new lines should now be laid down and put under construction as soon as possible, and that steps should be taken to improve the existing facilities so as to permit them to carry the increased burden during the time when the new lines are being constructed.

The tenor of your resolution is that such a plan be prepared for the whole City, and it was my intention to submit such a plan in its entirety. The question is, however, so great and broad, with details so complex, that with the consent of the Board, I will submit the plan in two parts, one covering the boroughs of Manhattan, The Bronx and Queens, the other Brooklyn and Richmond. In this way the details can be studied separately by the Board, and, if approved, can be suitably united and submitted as a whole to the municipal authorities.

The scope and extent of the present Subway system were unfortunately limited by a decision of the courts and the financial position of the City, so that the Board was compelled to lay out one line to serve both the east and west sides of the City. This attempt necessarily involved a certain sacrifice in directness, which directness is essential for quick time. This defect should now be removed by extending the subway south from Forty-second street along Broadway, and north from Forty-second street at Park avenue.

When the bids for the Brooklyn extension were opened, it will be recollected that Mr. Belmont, as President of the Rapid Transit Subway Construction Company, offered to build a line from Forty-second street to Fourteenth street at considerably below the estimated cost. Such a line would, however, but transfer the point of congestion from Forty-second street to Fourteenth street, and I therefore propose that this line be extended to the lower end of Manhattan Island at South Ferry, following University place, Wooster and Church streets, and thus furnish two additional tracks south of the Post Office. From this line at Broadway a subway under Thirty-second street to Seventh avenue should be built so as to bring the new Pennsylvania terminus to a connection with the Subway and Elevated railway for the purpose of local distribution of passengers. In like manner, I propose to make a junction, as our general plan originally contemplated, at about Fortieth street and Park avenue, and carry the new line, with three tracks, beneath the Grand Central Station to Lexington avenue, and then along and under that thoroughfare to The Bronx, making a connection with the New York Central and New Haven railroads at Mott Haven. Although the line passes beneath the yard of the New York Central between Forty-second and Forty-fifth streets, property not subject to condemnation, nevertheless, I believe that satisfactory arrangements can be made for the easement. A branch from this line can be carried westward under One Hundred and Tenth street to Lenox avenue, thus providing a connection between the east and west lines north of Central Park, as the Forty-second street subway line provides one south of the Park. On the extreme easterly end, the line in The Bronx should be extended from West Farms along the east side of Bronx park, unless the Park authorities prefer a direct route through the Park, in order to reach Wakefield and Mount Vernon, two rapidly growing sections of the City, now without rapid transit facilities. A branch should also be laid out continuing along the Southern Boulevard, and then westerly on One Hundred and Eightieth street, thus reaching a section of The Bronx not served by any line. A connection between the Bronx Park line and the Manhattan Elevated should also be made from Brook avenue along Westchester avenue to Third avenue.

The additional lines, and especially those in the subway, will require some years to complete, and during this time it is absolutely essential that immediate relief measures be provided. For reasons, not necessary to discuss, the Manhattan Elevated Railway Company has never accepted former suggestions of the Board to provide such additional facilities as the Board deemed advisable. Recently, however, the management of this property has passed under the control of the Interborough Rapid Transit Company, and I am informed by Mr. Belmont that he will gladly and liberally meet the views of the Board and extend the Manhattan lines, and so connect them with the Subway system that both systems may be operated as a unit, with through trains at a single fare. Such arrangement would at once confer a great benefit upon the local traveling public, as presenting the quickest means of securing immediate relief.

To this end I suggest the following alterations in the Manhattan structure and method of operation:

Second Avenue Division—Add two tracks from the Harlem river to Chatham Square, carrying the two new tracks over the Chatham Square junction and over the Park Row line to City Hall.

Third Avenue Division—Extend the third track from Fifty-ninth street to Ninth street, so as to make it continuous from the Harlem river to the latter point.

Suburban Division—Add a third track from south of the Harlem river to Westchester avenue.

When these lines are completed a rearrangement in operation can be made advantageously. The Third Avenue Division is the main system for local business on the East Side. To-day this local business is greatly interfered with by running the Bronx trains over the same structure, and in like manner the Bronx facilities are much restricted by the impossibility of running more trains over the Third avenue structure. By converting the Second Avenue Division into a four-track structure, and by extending it to the City Hall, an immeasurably better service will at once be provided for the east side of the City. Bronx passengers will then be carried direct on a continuously running express structure, while local passengers from points south of the Harlem will be carried by trains stopping at or starting from the river, and thus not come in contact with the through passengers. In like manner, by connecting the Rapid Transit Westchester avenue line with the Suburban line at One Hundred and Forty-ninth street, through trains can be run from points south of Bronx Park, or Wakefield, or Mt. Vernon by a direct line to all points south of the Harlem river, including South Ferry and City Hall, in through trains and for a single fare. This would save passengers from the northeastern portion of the Bronx one and three-quarter miles of their journey, which would otherwise be involved if they were carried to the west side of the City and back by the present subway. The saving in time would be even greater than the mileage would indicate, as the express service for such passengers would begin at One Hundred and Forty-ninth street and Third avenue, instead of at One Hundred and Tenth street and Lenox avenue. The subway proper would then begin at One Hundred and Forty-ninth street and Third avenue, and furnish the people living in the centre of the Bronx with fresh trains, transfers to which could be given at One Hundred and Forty-ninth street for the small proportion of travel that might desire to go from Bronx Park to the west side of Central Park. This would also permit the present Lenox avenue line to become what it should be, namely, a line for purely local Harlem travel, so that the residents of the Harlem District would be sure of finding seats.

Sixth Avenue Division—In order to furnish special trains for the retail shopping district lying north of Fourteenth street, and in order to furnish a connection to the terminus of the New York and Jersey tunnel at Greenwich and Christopher

streets, I would propose an extension of the Sixth avenue division along Christopher street to Greenwich street, connecting with the Sixth avenue division at the north end of the Eighth street station, and thence lay a third track on the Sixth avenue structure northward. By this means many north-bound trains could run "local" through the wholesale dry goods district, as a gathering ground, and having become filled by the time they reach Eighth street, could then pass on to the third track and run "express" to Harlem. The relief thus provided to the local track north of Eighth street would permit trains to start from Christopher street and run "local" through the retail district.

Ninth Avenue Division—I recommend:

(1) The extension of the third track from Fourteenth street south to Cortlandt street, so that the express service may begin from the latter point.

(2) A branch from the main structure at Fifty-third street, running westerly along Fifty-third street to Tenth avenue, northerly along Tenth avenue to Fifty-fifth street, where, owing to the topography, the elevated structure can be depressed into the subway and so carried under Amsterdam avenue to a connection with the subway at Seventy-second street. This connection can be built rapidly, and would serve in connection with the third track extension to Cortlandt street, as an immediate means of carrying the traffic assembling in the upper limits of the subway direct to South Ferry, thus giving some measure of relief pending the completion of the subway to the same point.

(3) The extension of the third track from One Hundred and Sixteenth street north to One Hundred and Fifty-fifth street, making a continuous third track from Cortlandt street to the Harlem river.

(4) Make an arrangement with the Putnam Division of the New York Central Railroad by which the present bridge across the Harlem river can be reconstructed into a three-track structure, and then extend the Eighth avenue line across the Harlem river, with three tracks, and by a short tunnel through the high ground on the east bank of the Harlem river to Jerome avenue, thence northerly along Jerome avenue to Woodlawn, and thence westerly in the neighborhood of Mosholu avenue to a connection with the Putnam Division in Van Cortlandt Park. This line will furnish in the quickest and most direct manner good service for what constitutes the largest inhabitable area of the old City of New York, which is to-day without rapid transit facilities. When the construction of the Lenox avenue and Broadway lines south from the Harlem river is completed, the Eighth avenue elevated will be relieved of a large amount of local travel, thus permitting the additional burden of the Jerome avenue extension to be successfully carried.

The railroads now terminating at the Grand Central Station supply transportation facilities to various parts of the northerly district of the City, and also to the suburban districts lying immediately north of the City, the residents of which come daily to New York for the transaction of business. At present these passengers are discharged at Forty-second street, and have to find their way to the lower part of the City or Brooklyn by other lines, the transfer involving serious delay. It is obvious that the proper method of handling such traffic is by direct means in through trains. If the consent of the above-mentioned railroads can be had, connections should be made at as many points as possible with the subway and elevated lines. The points where such connections can be made are with the Suburban elevated at Fordham; with the proposed Jerome avenue extension at Van Cortlandt Park; with the subway at Kingsbridge; with the Manhattan Elevated at One Hundred and Fifty-fifth street, to both the main line and the Putnam Division of the New York Central; with the subway to the New York Central, at the Harlem Ship Canal; with the Lexington avenue subway to the New York Central, Harlem and New York and New Haven railroads, at Mott Haven; and all so arranged that local trains from nearby suburban points can be run direct over the rapid transit lines, and thus avoid the congestion at the Grand Central Station or the delay in transferring from one railway to another. In addition to this, however, the New York Central Railroad Company now owns the railway along its own right of way, from Spuyten Duyvil to Fifty-ninth street, and thence on the surface of Eleventh, Tenth and other avenues and streets south to Houston and Beach streets. This line might easily be converted into a passenger line and furnish a great measure of rapid transit relief. The existence of the tracks on the street surface south of Fifty-ninth street is a great public burden, and should be removed if possible. I would suggest that negotiations be taken up with this Company looking to the removal of these surface tracks, and substituting in place thereof an elevated structure along the same route or possibly along West street, and which, if constructed so far south as Beach street, might be continued south to Battery place, and so provide not only a freight, but also a passenger line along the water front. If this were done, the line should be constructed with four tracks south of Fifty-ninth street, with the passenger tracks elevated above that point.

In regard to the Borough of Queens, the City is now constructing a bridge from the foot of Sixty-fourth street across Blackwell's Island, which will be completed in the course of two or three years. When this is done I suggest that a branch of the Second Avenue Elevated be constructed along Sixty-fourth street and over the bridge, to Long Island, and that a plaza be then arranged, permitting the present surface lines now plying throughout that district to approach and deliver their passengers to the elevated, by which they can be carried by an express and local service to any point north or south in Manhattan, Brooklyn or The Bronx. At present the development of Long Island City and Queens is not sufficiently concentrated to warrant the expensive construction of special rapid transit lines. The line, however, as proposed above, can be extended in the future as soon as the necessary demand arises and along such route as may then be determined.

Upon the map accompanying this report is indicated in appropriate colors the Subway and Manhattan systems as now constructed, or being constructed, and the additions and extensions of each as proposed, and also the line of the New York Central along the water front. The plan proposed in this report not only extends the subway, but makes it an evenly balanced system, with separate east and west side lines, and with intercommunication between such lines. If the Board should carry out these suggestions, the City will own a railway system complete in itself, covering thirty-seven and one-half miles in the boroughs of Manhattan and The Bronx, with one hundred miles of track, exclusive of side tracks. On the other hand, the plan proposes to afford the greatest measure of immediate relief by the only way in which such relief can be afforded, that is, by the expansion of existing facilities. Such expansion would be obtained by the use of private capital without encroaching on the debt-incurring capacity of the City, but under such proper terms as would be laid down by the Board. In like manner, the plan contemplates increasing the opportunities of those persons who live along or beyond the extreme northern limits of the City to reach their places of business and work, by direct lines and in much reduced time.

The equivalent amount of single track above mentioned is about one hundred and thirty miles, and the expense of construction, liberally estimated, is between $45,000,000 and $50,000,000, about one-half of which will fall on the City.

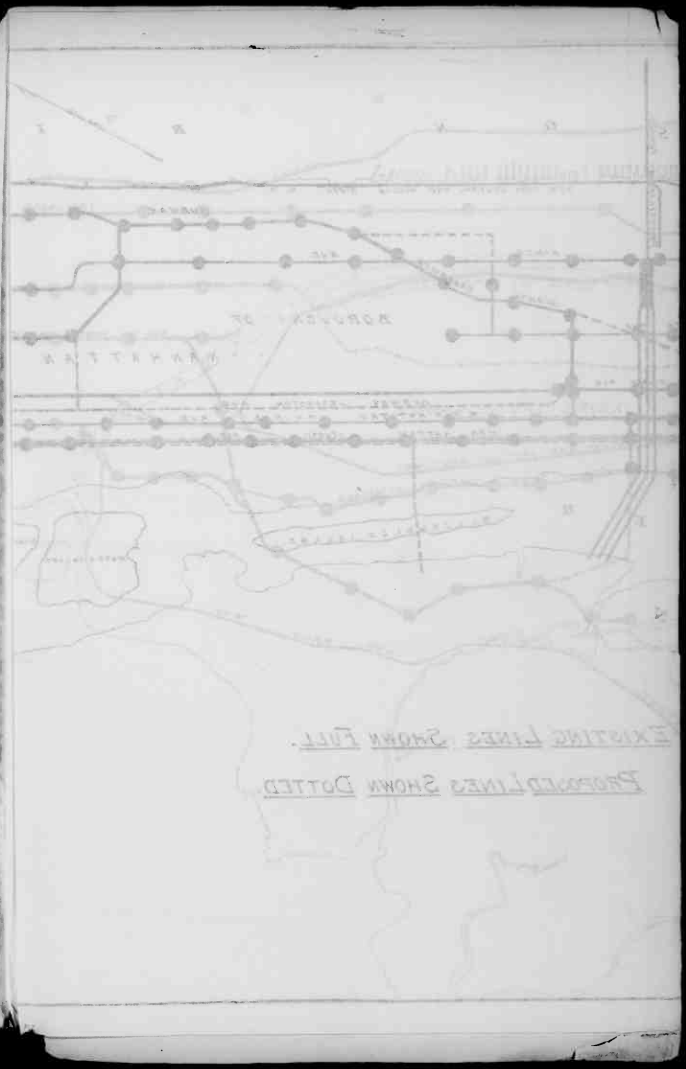
All of these lines herein suggested should, if approved by the Board, be placed under construction as soon as the necessary consents can be obtained, and the terms of the contract drawn up; and it is hoped that they will be sufficient to provide for the boroughs of Manhattan and The Bronx for some years to come.

In regard to the great and growing Borough of Brooklyn, a similar plan should be carried out, of adding new lines where such new lines are needed to reach territories not now served; to expand existing lines where the present service is inadequate; and, above all, to better utilize present means of communication between Brooklyn and Manhattan, to provide new and better means, and also to furnish to residents in Brooklyn facilities for distribution in Manhattan, and to avoid the terrible congestion now existing at a single point. Such a plan is obviously large, and so large, it seems to me, that it warrants consideration by your Board on its own merits, and free from possible complications if it is taken up in connection with the plans for Manhattan and The Bronx. This plan will necessarily deal

with the problem of connecting in Manhattan the various bridges and tunnels going from Brooklyn to Manhattan. As soon, therefore, as the Board has examined the plans covered by this report, another plan, equally comprehensive it is hoped, will be laid before you covering the Borough of Brooklyn.

Respectfully submitted,

WM. BARCLAY PARSONS, Chief Engineer.



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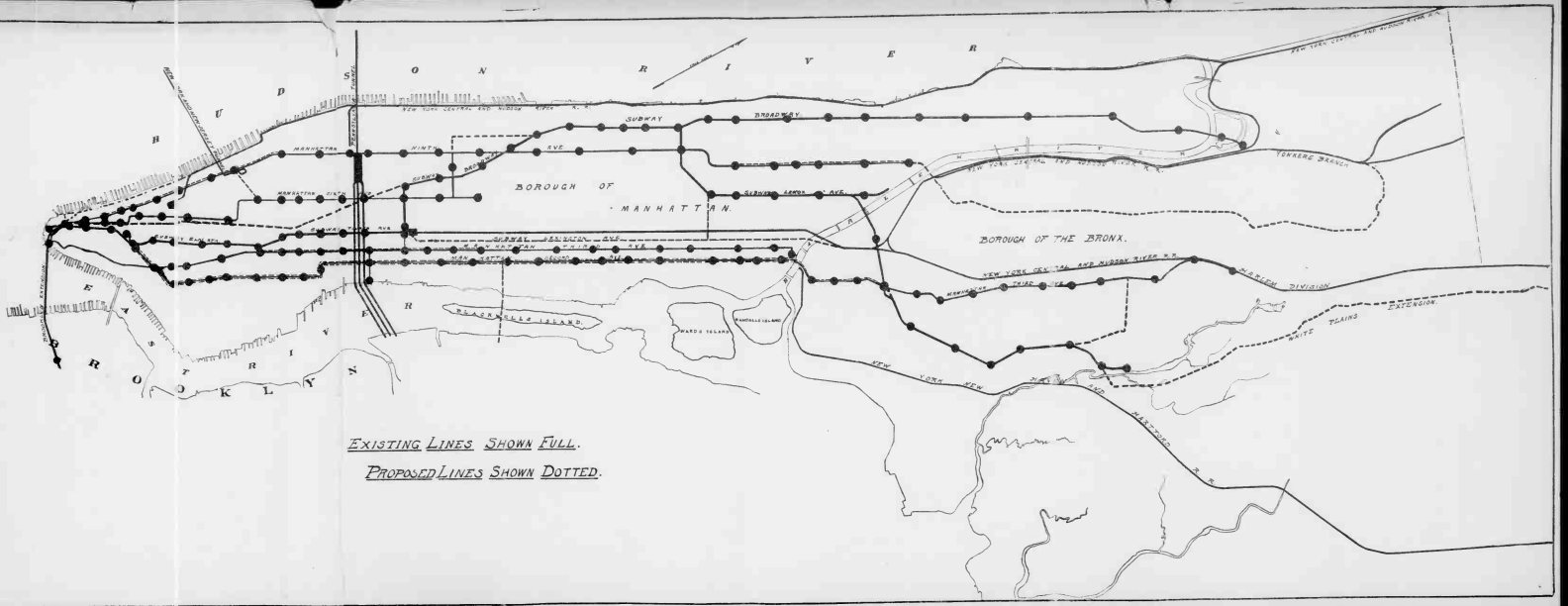
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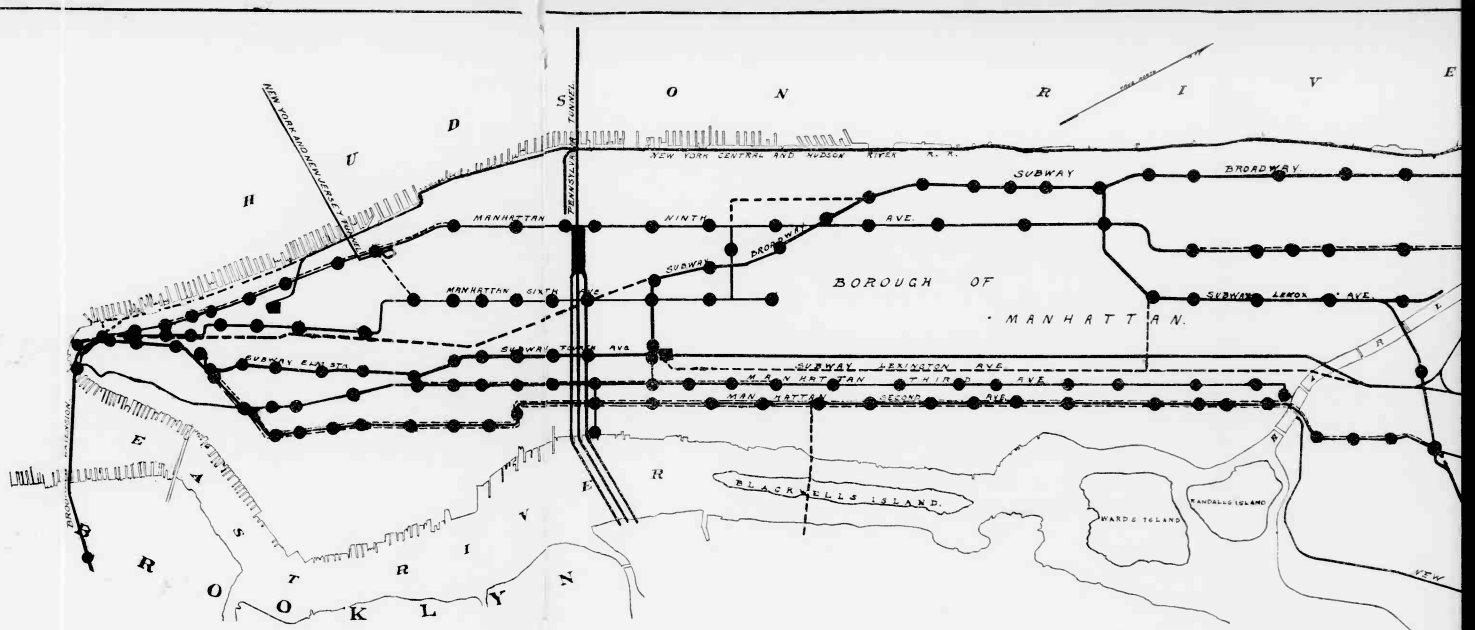

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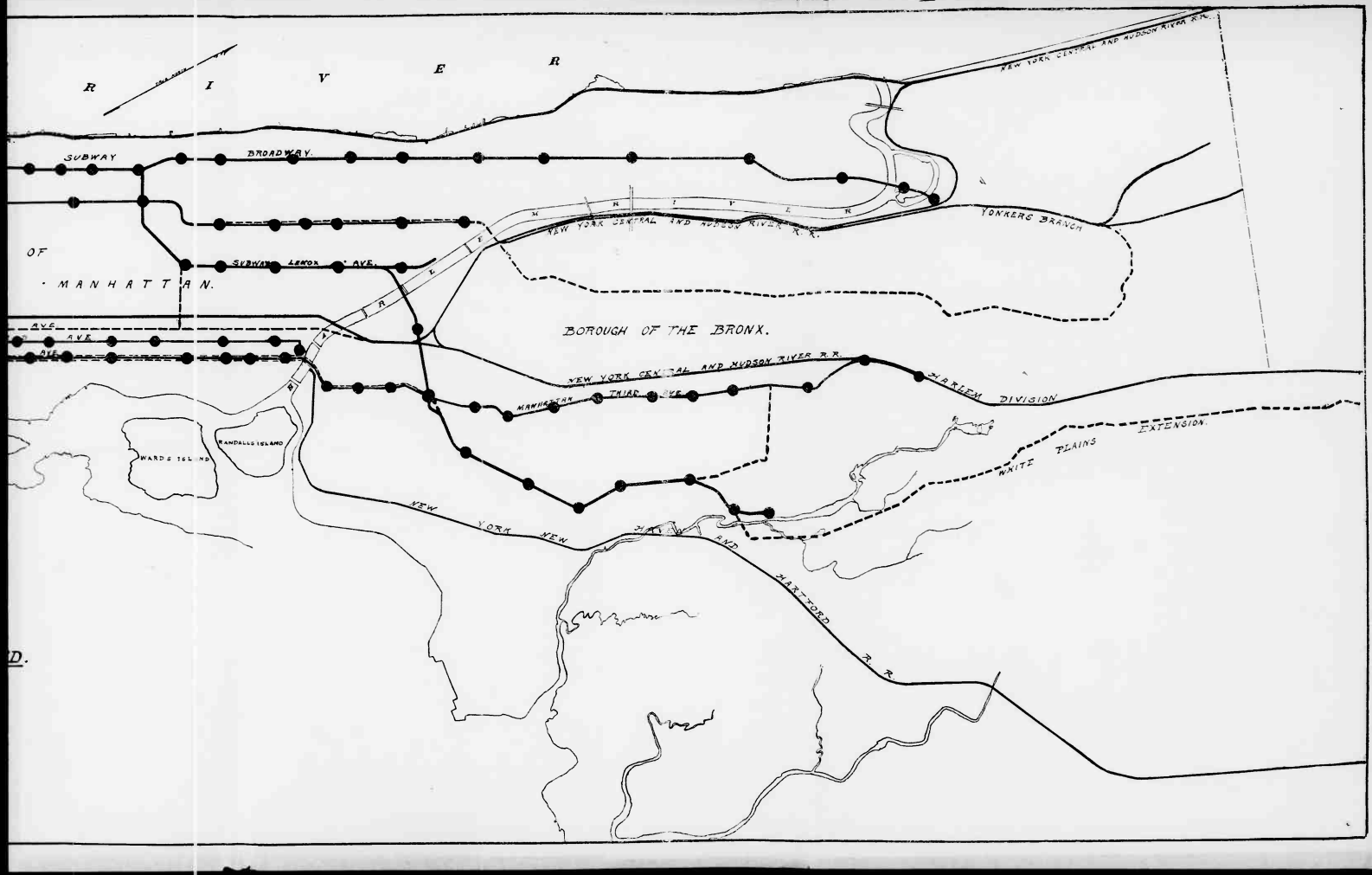
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